



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,879	12/20/2000	Tara L. Cobble	00-104	7501

719 7590 07/11/2003

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

DESTA, ELIAS

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,879

Applicant(s)

COBBLE ET AL.

Examiner

Elias Desta

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

1. In response to the Appeal Brief filed April 14, 2003, prosecution in the above-identified application is hereby reopened.

Claim Objection

2. Claims 1, 17, 21 and 45 are objected to because of the following minor informalities:

- Claim 1: line 4, change “receiving from an user ...” to “receiving from a user...” and last line, the phrase “an another” should be one word, “another”;
- Claim 17: line 4, change “receiving from an user ...” to “receiving from a user”;
- Claim 21: line 4, change “receiving from an user ...” to “receiving from a user...” and on lines 7 and 8, delete the coma after “ ... one question” and “... recommended actions” respectively; and
- Claim 45: line 6, change “... receiving from an user ...” to “... receiving from a user ...” and on line 11, delete the comma after “... recommended actions”

Claim rejection – 35 U.S.C. 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 10, 15-17, 33 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237).

Molloy discloses receiving a description of an initial problem related to a work machine (i.e., a computer, which is defined as a type of work machine in the instant specification on page 5, lines 11-15) from a user (see Molloy, Fig. 15, and column 13, lines 46-47). The method includes:

- Receiving from a user a description of an initial problem related to the work machine (i.e., “problem concepts”; see Molloy, Fig. 16, and column 13, lines 54-59);
- Displaying at ^{two} least one question as a function of the initial problem (i.e., “problem concepts”; see Molloy, Fig. 16);
- Displaying a first set of recommended actions as a function of the initial problem (i.e., multiple “ACTION” entries in Molloy, Fig. 16);

- Receiving and displaying an answer from the user to at least one question (see Molloy, Fig. 17, column 13, lines 60-64);
- Displaying a second set of recommended actions as a function of the initial problem and the answer at least one question that is a subset of the first set of recommended actions (i.e., multiple “ACTION” entries in Molloy, Fig. 18, and column 13, line 65 to column 14, line 9);
- Displaying a confidence level associated with each recommended action in the first and second sets of recommended actions as a bar graph (see Molloy, Figs. 16, 18, column 13, lines 54-59, column 14, lines 2-4, and column 8, lines 10-15); and,
- Displaying a question and action detail window containing detailed information regarding at least one question and selected action in response to user selection of the question and action from the first and second sets of recommended actions (i.e., windows at bottom of Molloy, Figs. 3-6, 15, 17, and column 8, line 52 to column 9, line 11).

Molloy does not teach reading data values from the work machine in response to the user request.

Phung et al. teaches the method and system for the diagnosis of vehicles by identifying vehicle profile and capture diagnostic symptoms and the resolution for repair (see Phung et al., abstract). Further in Fig. 4, Phung et al. teaches reading data

Art Unit: 2857

values from a work machine in response to the user request (see Phung et al., Figs. 2A, 2B and 6A).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the work machine diagnostic method as taught by Molloy to incorporate the method of reading data values from the work machine in response to a user request as shown in Phung et al., in order to obtain vehicle system information for all required evaluation; because having a direct vehicle interface with the global data center enables the end user to maintain a smart diagnostic database and historical repair case database for better problem resolution (see Phung et al., Fig. 2B and page 1, paragraph 11).

With regard to claims 2: as noted above in claim 1, Molloy further teaches that the steps of displaying the answer provided by the user (see Molloy, Figs. 15 and 16).

With regard to claim 3: as noted above in claim 1, Molloy further teaches that the method includes displaying the confidence level associated with each recommended action in the first and second sets of recommended actions (see Molloy, Figs. 16, 18, and column 13, lines 54-59).

With regard to claim 4: as noted above in claim 1, Molloy further teaches that the method of displaying the confidence level is shown as a bar graph (see Molloy, Figs. 16 and 18).

With regard to claim 15: as noted above in claim 1, Molloy further teaches that the computer based system includes the step of displaying a question detail window (see Fig. 16) containing detailed information regarding at least one question, in response to user selection of the at least one question (see also Fig. 15).

5. Claims 5-8, 18, 21-31, 38-41 and 44 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237), and further in view of Nguyen et al. (U.S. Patent 6,125,312).

With regard to claims 5, 6, 28 and 29, as noted previously, Molloy discloses many features of the claimed invention including displaying a status of each case as either "open" or "closed" (Fig. 5, and column 7, line 31). Molloy does not explicitly disclose displaying a status associated with each recommended action as either performed or not performed.

Nguyen et al. discloses a maintenance control system that ensures that all fault codes are responded to (i.e., that maintenance personnel carry out the appropriate maintenance actions in response to each and every fault code) and records maintenance action log (see Nguyen et al., Fig. 1, item 20, and column 1, line 66 to column 2, line 10).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy to display a status associated with each recommended action as either performed or not performed, as suggested by Nguyen et al., because Nguyen et al. teaches that doing

so ensures that all fault codes are responded to with a view to improve quality assurance of maintenance (see Nguyen et al., column 1, line 66 to column 2, line 5).

With regard to claims 7, 8, 21-27, 30, 31, 38-41 and 44, as noted previously, Molloy discloses many features of the claimed invention, but does not disclose providing a link to information related to the work machine in an external source and displaying information in response to actuation of the link (a diagnostic advisor window/tool).

Nguyen et al. discloses providing a link to information in response to actuation of the link (see Nguyen et al., column 1, lines 54-65).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy to provide a link to information related to the work machine in an external source and display information in response to actuation of the link as disclosed by Nguyen et al., because Nguyen et al. teaches that doing so avoids duplication of information and the need for synchronization of the integrated system (i.e., linked system) (see Nguyen et al., column 1, lines 57-61 and column 3, lines 27-54).

6. Claim 9 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Nixon et al. (U.S. Patent 4,841,441).

As noted previously, Molloy discloses many features of the claimed invention, but does not disclose identifying inconsistent answers provided by a user to two or more questions. Nixon et al. discloses an expert system that identifies inconsistent

answers provided by a user to two or more questions (see Nixon et al., column 21, lines 44-46).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy for the purposes of identifying inconsistent answers provided by a user to two or more questions as disclosed by Nixon et al., because doing so ensures that answers subsequent to the first answer do not jeopardize the validity of the recommended actions that are based in part on the subsequent answers.

7. Claims 11-14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237), and further in view of Gilmour (U.S. Patent 6,205,472).

As noted previously, Molloy in combination with Phung et al. discloses many features of the claimed invention, but does not disclose displaying an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action. Gilmour discloses displaying an alert link and dialog in response to actuation of the link by the user (i.e., link to an alert page; Gilmour, column 29, lines 13-15) corresponding to at least one question (i.e., text of the original query; Gilmour, column 29, lines 6-21).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy to display an alert link and dialog in response to actuation of the link by the user corresponding at least one question and recommended action, as taught by Gilmour

because an “alert” notification commands a higher importance over an informational message that does not have “alert” status, i.e., the users attention can be gained more readily using an alert link in order to display messages of higher importance related to a question or recommended action.

8. Claims 19, 20, 42 and 43 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237) and Nguyen et al. (U.S. Patent 6,125,312) and further view of Hugh (U.S. Patent 6,166,736).

As noted previously, Molloy in combination with Phung et al. discloses many features of the claimed invention, but do not disclose providing a tabbed windowpane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel corresponding to a diagnostic panel, a diagnostic code panel, and functional test panel.

Hugh discloses a tabbed windowpane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel (see Hugh, Fig. 3 and column 2, lines 18-21).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy in combination with Phung et al. and Nguyen et al. in order to provide a tabbed window pane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel, as taught by Hugh, because

Art Unit: 2857

Hugh teaches that doing so allows a user to switch amongst multiple windows quickly (see Hugh, column 2, lines 18-20). Further, although Hugh does not teach the specifics of assigning diagnostic, diagnostic code, and functional test panels to the tabs, it is examiner's position that the choice of assigning a diagnostic panel, a diagnostic code panel, and functional test panel to the tabs disclosed by Hugh in a matter of obvious design choice once the use of tabs, as disclosed by Hugh, in the overall GUI design set.

9. Claim 32 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237) and Nguyen et al. (U.S. Patent 6,125,312), and further in view of Nixon et al. (U.S. Patent 4,841,441).

As noted previously, Molloy in combination with Phung et al. and Nguyen et al. discloses many features of the claimed invention, but does not disclose identifying inconsistent answers provided by a user to two or more questions. Nixon et al. discloses an expert system that identifies inconsistent answers provided by a user to two or more questions (see Nixon et al., column 21, lines 44-46).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy in combination with Phung et al. and Nguyen et al. to identify inconsistent answers provided by a user to two or more questions as disclosed by Nixon et al., because

Art Unit: 2857

doing so ensures that answers subsequent to the first answer do not jeopardize the validity of the recommended actions are based in part on the subsequent answers.

10. Claims 34-37 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Molloy (U.S. Patent 5,787,234) in view of Phung et al. (U.S. PAP 2002/0007237) and Nguyen et al. (U.S. Patent 6,125,312) and further view of Gilmour (U.S. Patent 6,205,472).

As noted previously, Molloy in combination with Phung et al. and Nguyen et al. discloses many features of the claimed invention, but does not disclose displaying an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action. Gilmour discloses displaying an alert link and dialog in response to actuation of the link by the user (i.e., link to an alert page; Gilmour, column 29, lines 13-15) corresponding to at least one question (i.e., text of the original query; Gilmour, column 29, lines 6-21).

Therefore, it would have been obvious to one of ordinary skill to modify Molloy in combination with Phung et al. and Nguyen et al. to display an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action, because an “alert” notification commands a higher importance over an informal message that does not have “alert” status, i.e., the users attention can be gained more readily using an alert link in order to display messages of higher importance related to question or recommended action.

Art Unit: 2857

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (703)-305-3840. The examiner can normally be reached on M-Thu (8:00-6:30).

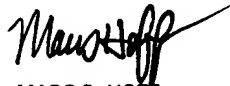
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-5841 for regular communications and (703)-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

Elias Desta
Examiner
Art Unit 2857

-ed

June 29, 2003


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800